562620-000, Issue1.0, March 2014

PMERail Ultra

Rated Capacity Controller

Machine Envelope Controller

Maintenance Manual

This guide describes operation of the

PROLEC PME LIFTING AND MACHINE ENVELOPE SAFETY SYSTEM FOR

RAIL CONSTRUCTION PLANT

Model covered :	PART No.	MODEL Ref
	PMERail	PMERail - RCC / MEC SYSTEM
	PMERail Lite	PMERail Lite - RCC / MEC SYSTEM
	PMERail Max	PMERail Max - RCC / MEC SYSTEM
	PMERail Ultra	PMERail Ultra - RCC / MEC SYSTEM

PMRail Ultra RCC system has been designed for compliance with RIS-1530-PLT Issue 4 and NR MLD/004

IMPORTANT : Before use, check the Engineering Acceptance certification and machine documentation to confirm if the Rated Capacity Controller, Adjacent Line Open and Overhead Line Equipment limitations that may exist within the use of the machine and / or the PME system.

Prolec supports a nationwide dealer network. Warranty claims, service work, technical information and spare parts are available by contacting :

Prolec Ltd	Telephone	+44 (0) 1202 681190
25 Benson Road	Fax	+44 (0) 1202 67790
Nuffield Industrial Estate	E-mail	service@prolec.co.uk
Poole Dorset BH17 0GB		

DURING NORMAL OPERATION THE SAFE WORKING LOAD OF A CRANE SHOULD NOT BE EXCEEDED. THEREFORE THE WARNING OF OVERLOAD SHOULD NOT BE USED AS A NORMAL OPERATING FACILITY. IT SHOULD BE NOTED THAT CERTAIN STATUTORY REQUIREMENTS DO NOT PERMIT THE SAFE WORKING LOAD TO BE EXCEEDED EXCEPT FOR THE PURPOSE OF TESTING.

THIS RATED CAPACITY CONTROLLER (RCC) IS NOT SUITABLE FOR USE IN EXPLOSIVE ATMOSPHERES. ADJUSTMENT BY UNAUTHORISED PERSONS WILL INVALIDATE ANY WARRANTY OR CERTIFICATION SUPPLIED. IF A PROBLEM ARISES WHICH CANNOT BE RECTIFIED USING THIS GUIDE, AUTHORISED SERVICE SHOULD BE SOUGHT.

THIS DEVICE IS CERTIFIED TO MEET CURRENT UK & EC SAFETY REGULATIONS FOR LIFTING OPERATIONS.

Any alterations or modifications to machine components which affect this system and any system component failure must be reported to Prolec Ltd or via the machine convertor/ service agreement holder. This manual must be kept with the product and be passed on to any subsequent user of the product.

Whilst every effort has been made to ensure the accuracy of the information supplied in this manual, Prolec Ltd cannot be held responsible for any errors or omissions.

Manufacturers original instructions.

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1 Use of this Document

This user guide is intended for persons familiar with the use of construction plant undertaking lifting operations in a rail environment.

WARNING denotes information about particular risks which may be generated by certain applications, by using certain fittings, and about additional protective measures which are necessary for such applications.

Caution, care, risk situation

HAZARD Actions that can lead to serious injury or death

2 Notices

Adjustment by unauthorised persons will invalidate any warranty or certification supplied. If an error condition is displayed which cannot be rectified using this guide, halt any operation, seek authorised service immediately and do not continue operation until the fault has been remedied.

3 Operating and Hazard Situation Recommendations

Operating Recommendations

When using envelope monitoring:

- When setting height or slew restrictions, make sure any implement/tool attached is in its least favourable position
- Check for correct operation once the restriction has been set
- Reduce operating speed
- Do not move the equipment quickly when close to a restriction
- Do not operate the machine in a reckless manor
- Do not travel with a restriction set
- Reset the slew restriction if the machine is relocated

When operating the machine as a crane:

- Ensure Lift Mode is selected during lifting operations
- Operate the machine at a sensible speed
- Take extra care when travelling with a load attached
- Do not operate the machine in a reckless manner

Hazard Situation Recommendations

In a limit hazard state:

- Return the control levers to neutral once a limit has been reached if appropriate
- Operate the machine at a slow speed
- Do not travel

3.1 RCC - MEC Override

The system is fitted with a key operated master override switch. To access the master override switch, a tamper detection device must be broken and the operation of this switch will be automatically logged. Turning the switch to the override position will allow normal operation of any of the hydraulic services controlled by PMERail regardless of safety status. When the system is in override, the external alarms will stay active, the amber and blue lamps will be off and the red LED will flash along with an ‘In Override’ message be displayed.

The override key switch should only be used if the system is not operational due to a fault and the machine needs to be moved due to its location presenting a hazard.

The override status will be recorded in the system data logger.

4 System Identification

The PMERail system provides two primary safety functions

1. Lifting Stability
2. Machine Envelope Monitoring

Both safety functions are achieved through real time monitoring some or all of the machine's moving parts (booms, other articulations, turret etc) and its environment (ground pitch and inclination, load etc) and actively determining the safety of the current operation where appropriate limits have been set.

The Lifting Stability function falls into a single class

- Rated capacity controllers (RCC) prevent instability when the machine is involved in lifting operations. This is achieved by hydraulically stopping unsafe movements of the machine which could cause the machine to tip.

The Machine Envelope Monitoring function has a single class

- Machine envelope controllers (MEC) prevent movements that would bring parts of the machine into hazardous areas.
- MEC equipped systems may include Height Limiting and or Slew Limiting.

5 Service and Repair

PMERAIL has very few user serviceable parts. The safety controller / I/O module have internal fuses that can be replaced if required. Section 6 describes daily, monthly and yearly checks that must be carried out to ensure safe operation of the system.
If an issue is discovered which cannot be rectified using this guide, halt any operation, seek authorised service immediately and do not continue operation until the fault has been remedied.

5.1 Maintenance Review

Due to nature of the PMERail systems operating environment, changes in usage can occur. Prolec Ltd or the service agreement holder must be notified of any changes in the pattern of use of the system for consideration.
Any alterations or modifications to machine components which affect the system must be reported to Prolec Ltd or via the service agreement holder. To aid in the use of PMERail, all appropriate technical bulletins relating to PMERail must be assessed and implemented as appropriate. This information is available from Prolec Ltd. Prolec Ltd must be informed of any Prolec system component failure. Be it directly or via the service agreement holder.

6 Maintenance

The maintenance instructions for the RCC - MEC fitted your RRV are to be carried out in conjunction with the vehicle manufactures instruction handbook and Prolec PMERail Operators Manual - Prolec Part Number 562600-000. See section 11 for test / diagnosis features, section 9 for error message, section 11.1 for relay testing and section 11.3 for lamp, alarms and LED testing. If an failure is discovered which cannot be rectified using this guide, halt any operation, seek authorised service immediately and do not continue operation until the failure has been remedied.

Statutory examinations shall be carried out by an external body and maintenance / re-calibration of RCC will be carried out by your service agreement holder.

6.1 Maintenance Plan Guidance

PMERAIL systems are to be examined using the maintenance plan in table 2 at frequencies no greater than the limits set out below:

Exam code A - Daily
Exam code B - Weekly
Exam code C - monthly
Exam code D - Yearly

The Maintenance Summary in table 3 outlines the jobs to be under taken. Terms used are defined in table 1 below:

Term	Action
Check:	Determine a particular nominated condition before, during or after repair, for example completeness, security, position
Damage:	Physical harm on (something) so as to impair its value, usefulness, or normal function
Examine:	Determine general condition before repair, for example wear, cracks, splits, leaks, scoring, erosion, breaks, distortion, looseness
Failure:	Any fault or faults in a component or assembly, for example structural fractures or weld fractures, which may prevent the component or assembly from fulfilling its designed purpose
Non compliance:	To not meet terms or conditions
Report:	Put down in writing a finding from examination, test and or checks
Test:	Prove correct operation by trial

Table 1 - Maintenance terms

6.2 Maintenance Plan

Job Code	Job Title	Exam Code			
		A	B	C	D
RCC Function test					
SFT1	Blue Lamp - test	*	*	*	
SFT2	Amber Lamp - test	*	*	*	
SFT3	Overload Alarm - test	*	*	*	
SFT4	Locking Road Axle Interlock - test	*	*	*	
SFT5	Locking Rail Axle(s) Interlock - test	*	*	*	
SFT6	Travel Interlock - test	*	*	*	
SFT7	All Motion Cut s controlled by PMERail - Test	*	*	*	
SFT8	Speed indicator - test		*	*	
LT1	Height Limiter - test	*	*	*	
LT2	Slew limiter - test	*	*	*	
IGT1	In Gauge - test		*	*	
RCC Feature check					
SFC1	Locking Road Axle status - check	*	*	*	
SFC2	Locking Rail axle(s) status - check	*	*	*	
SFC3	Bogie deployment status - check	*	*	*	
SFC4	Offset Boom status - check	*	*	*	
SFC5	LUL Status - check	*	*	*	
SFC6	Stabiliser(s) status - check	*	*	*	
SFC7	Counterweight status - check	*	*	*	
SFC8	Supervisor keyswitch - check			*	
SFC9	Master override keyswitch - check			*	
HRC1	Lifting point(s) height and radii - check		*	*	
SWLC1	Safe Working Load - check		*	*	
ATC1	Anti tamper devices - check		*	*	
RCC system examination					
SCE1	System Components - examine		*	*	
RCC LOLER					
L1	LOLER				*

Table 2 - Maintenance Plan

6.3 Maintenance Summary

Job Code	Job Description
SFT1	Test overload alarm functionality audibly
SFT2	Test overload blue Lamp functionality visually
SFT3	Test overload amber Lamp functionality visually
SFT4	Test road axle interlock functionality disengages manual control
SFT5	Test rail axle interlock functionality disengages manual control
SFT6	Test travel interlock functionality disengages manual control
SFT7	Test motion cuts to ensure functionality disengages manual control (I.e. Boom UP, Arm OUT, Slew LEFT - RIGHT)
SFT8	Test speed indicator - tolerance +-10%
LT1	Test height limiter stops the highest section of equipment before the limit, see section 8 of the PMERail Operator Manual - Prolec Part Number 562600-000
LT2	Test slew limiter controls and stops machine before the limit, see section 8 of the PMERail Operator Manual - Prolec Part Number 562600-000
IGT1	Test In Gauge functionality shows correct state and disengages manual control when operated
SFC1	Check road axle icon shows correct state on display when operated
SFC2	Check rail axle(s) icon shows correct state on display when operated
SFC3	Check bogie deployment icon shows on display correct state
SFC4	Check offset Boom shows correct state on display when operated
SFC5	Check LUL duty change shows correct state on display when operated
SFC6	Check stabiliser icon shows correct state on display when operated
SFC7	Check counterweight icon shows correct state on display when operated
SFC8	Check supervisor keyswitch icon shows correct state on display when operated
SFC9	Check Master override keyswitch icon shows correct state on display when operated
HRC1	Check lifting point(s) height and radii shows correct values at two positions - tolerance +-50mm.
SWLC1	For Road and Road modes (Level rail) reference load chart and compare with SWL capacity shown with the lifting point at the following 4 points (adjust accordingly if radius/ height are not appropriate for the machine under test) - tolerance +-2%: 3.0m radius, 2.0m height, 0 degrees 4.5m radius, 2.0m height, 90 degrees 6.0m radius, 2.0m height, 80 degrees 7.5m radius, 2.0m height, 270 degrees

Continued on next page

6.1 Maintenance Summary continued

<table>
<tr><td>Job Code</td><td>Job Description</td></tr>
<tr><td>ATC1</td><td>Check Anti tamper sticker visually for damage

Image 1 - Anti Tamper Sticker</td></tr>
<tr><td>SCE1</td><td>Examine sensors / controller units, display and cabling visually for damage

Image 2 - Direct Drive Angle Sensor

Image 3 - Control Unit / Connectors / Cabling

Image 4 - Display

Image 5 - Angle Sensor / Connectors / Cabling</td></tr>
<tr><td>L1</td><td>Carry out LOLER certification</td></tr>
<tr><td colspan="2">Remedial Action: All jobs - Report any failure, damage and or non compliance</td></tr>
</table>

Table 3 - Maintenance Summary

7 OLE equipped system - PMERail Ultra

Any system with Height limiting enabled will allow a height limit to be set which will stop the boom, artic (if fitted) and arm at the limit whichever is the highest. See section 16 for monitored points on the machine. PMERail is NOT aware of any attachment fitted, therefore where an attachment is in use, limits should be determined and set in accordance with the safe system of work.

Care should be taken to test that the limit is set correctly. Observe the operational limitations given in section 3.

8 ALO equipped system - PMERail - Max and Ultra

Systems with slew limiting enabled will allow a limit to be set on one side of the machine perpendicular to the track. The Artic pivot pin (if fitted), arm pivot pin and tool point are monitors along with the corner of the cab, battery box and counterweight. See section 16 for monitored points on the machine. PMERail is NOT aware of any attachment fitted, therefore where an attachment is in use, limits should be determined and set in accordance with the safe system of work.
With a limit set, the system will:

- Activate an amber lamp to show a slew limit is active
- The slewing speed of the machine will be reduced to one of three possible states:
  - Linear speed at the tool point will be no greater than 2 m/s when MORE than 2m (default) away from the set limit.
  - Linear speed at the tool point will be no greater than 1 m/s when LESS than 2m (default) away from the set limit.
  - Linear speed at the tool point will be CONTROLLED by PMERail when LESS than 1m (default) away from the set limit. If the tool point reaches 1m (default) away from the limit, PMERail will:
    - Motion cut slew at 1m (default) from the limit to allow PMERail to take over slew control in the direction of slew travel only.
    - To re-enable movement toward the slew limit, the slew joystick must be returned to the neutral position then back towards the limit. The warning message show here will be displayed, linear speed at the tool point will be no greater than 1 m/s in this state.

- It will be possible to move away from a limit at anytime, the linear speed at the tool point speed will be increased back up to no greater than 2 m/s.
- The counterweight will not induce the 1m/s state even if it comes within 2m of the limit.

Care should be taken to test that the limit is set correctly. Observe the operational limitations given in section 3.

9 Repair

Once a repair has been carried out and tested, the following must be checked:

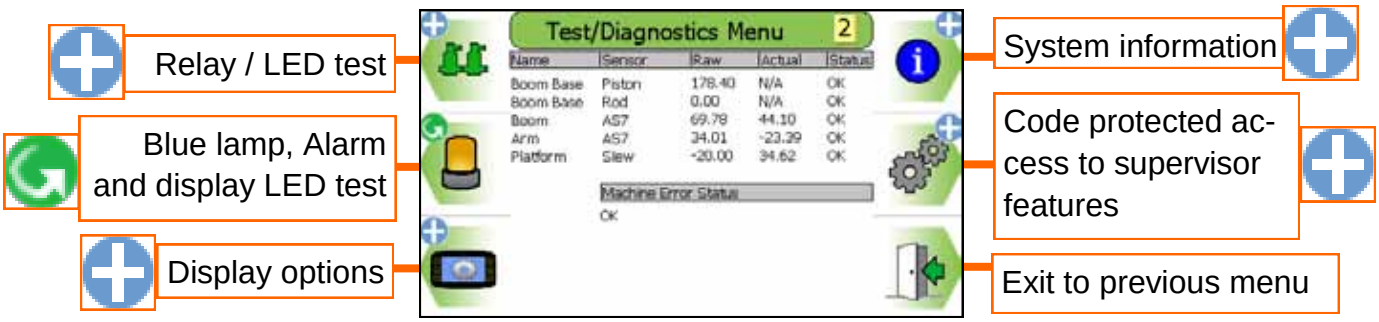
Required Checks	Section
Maintenance Plan - Exam Code C	6

10 Safety Controller / I/O Module Fuse replacement

If a fuse supplying power to a motion cut has blown, circled blue in the image opposite, it can be replaced. Using the Relay test screen, see section 11.1, identify the module controlling the service in question. Disconnect all power from the system, it is recommended the main power feed to the unit is removed and the machine ignition key is in the off position. Remove the module from its mounting bracket (four M10 nuts) then remove the back plate (eight M4 cap head bolts). A spare main fuse (20A) and motion cut fuse (3A) are provided in the fuse holders marked ‘Spare’, circled red in the image below. Spare fuses used should be replaced. Ensure the seal is replaced correctly when reassembling the unit.

11 Test / Diagnostics

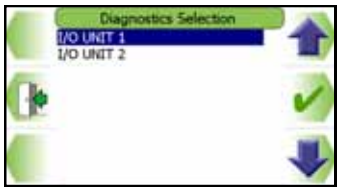
The system test function is available from the top menu screen. This feature allows the system functions to be verified and basic trouble-shooting to be performed. In this mode, the amber LED will flash to indicate the system is in maintenance mode. The system will continue to monitor any active limits to monitor machine safety status if in lift mode. Alarm conditions and warnings / controls will be issued as normal.

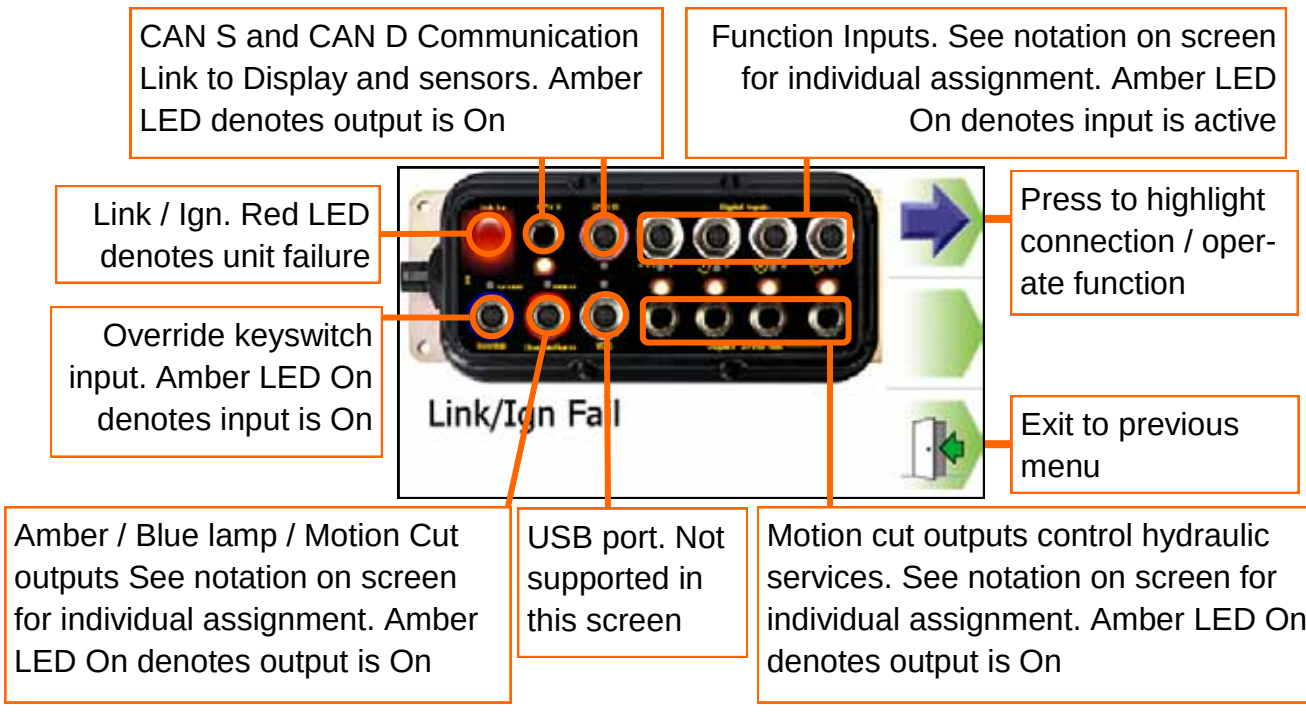


The image shown is an example. The exact contents of the sensor list will depend on machine type and specification.

11.1 Relay Function Test

Select the unit required from the list shown opposite.




CAN S and CAN D Communication Link to Display and sensors. Amber LED denotes output is On
Function Inputs. See notation on screen for individual assignment. Amber LED On denotes input is active
Link / Ign. Red LED denotes unit failure
Override keyswitch input. Amber LED On denotes input is On
Press to highlight connection / operate function
Exit to previous menu
Amber / Blue lamp / Motion Cut outputs See notation on screen for individual assignment. Amber LED On denotes output is On
USB port. Not supported in this screen
Motion cut outputs control hydraulic services. See notation on screen for individual assignment. Amber LED On denotes output is On

11.2 Sensor Information

Displays the systems sensor information in bar or degrees. Use the Actual column for direct comparison. The status column shows the health of each sensor.

Base Pitch = Pitch Angle

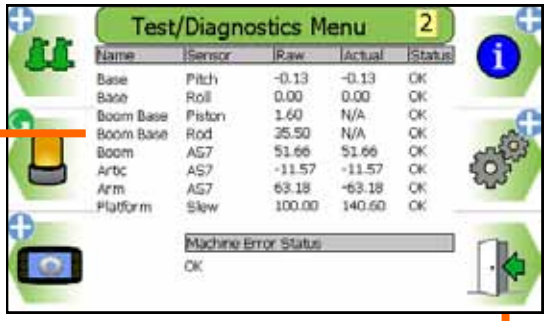
Base Roll = Pitch Angle

Boom Base Piston = Piston Pressure

Boom Base Rod = Rod Pressure

Boom AS7/10 = Boom angle

Artic AS7/10 = Artic angle



Exit to previous menu

11.3 Blue and Amber lamp, Alarm and display LED Function

Press to activate the function in turn.

Press the Beacon button to activate

Press the Alarm button to activate the blue and amber lamps

Press the Alarm button to activate the display LEDs

12 System Information

Information regarding the system can be found from this menu.

13 LED and Internal Alarm Warnings

The table below shows the state of the three LEDs on the display and the internal alarm with respect to system status.

LED and Internal Alarm status	System status
	Off
	Start up, Power Down
	Operational: System OK, no warnings, hazards, or errors
1 Hz	Warning: Approach to overload or envelope limit
Continuous	Hazard; Overload or breach of an envelope limit
	Maintenance: Engineering access active
8 Hz	Error: PME hardware/software error, or sensor failure

14 System Messages

14.1 On Screen Safety Messages

Close to max height	Highest point of equipment within *0.5m of set limit
Maximum height reached	Equipment has reached set limit
ALO Controlling Slew	PMERail is controlling slew movement toward the slew limit
Close to Slew limit	Equipment within *10 degrees or 0.5m of set limit
Slew Limit reached	Equipment has reached set limit
Max Boom Angle reached	Boom has reached a maximum set angle
Lifting barred in next Duty	Insufficient lifting capacity in next duty
Lifting barred in this Duty	Cannot lift in this duty
Maximum working cant reached	Track cant reached limit (default = 150mm).
Maximum working gradient reached	Track gradient reached limit (default = 1 in 25).
Close to canted duty	Insufficient lifting capacity in next duty (Lift and carry duties only) No motion cut will occur
Fully Extend/Retract Counter-weight	Fully extend/retract counterweight
Offset boom is not straight	Offset boom not straight.
Close to SWL	95 percent of the maximum safe working load
Overload	105 percent of the maximum safe working load
Hydraulic Limit	Pressure in a ram/s is in excess of 87% of main relief valve pressure
In Override	Override has been activated (Soft override or master Key)
In Gauge Lock Active	In Gauge mode has been activated

*The approach limit is configurable at point of calibration, check system operation before commencing work.

14.2 On Screen Component Error Messages

PMERail continuously monitors the presence and condition of it's system components. If any sensor, input, output, or other component fails, an error message will appear along the bottom of the display. In the event of a failure, ALL motion control relays will be operated, the cab mounted blue lamp will indicate that the RCC is NOT active, the display red LED will flash and the internal and external alarms will sound. Warning messages can appear on the screen at any time. They will automatically clear when the error condition has been rectified. Below is a summary of possible messages:

Sensor Broadcast Error ID 33	Boom Piston / Rod Pressure Sensor Error
Sensor Broadcast Error ID 32	Boom Angle Sensor Error
Sensor Broadcast Error ID 96	Artic Angle Sensor Error
Sensor Broadcast Error ID 64	Arm Angle Sensor Error
Sensor Broadcast Error ID 128	Hitch Angle Sensor Error
Sensor Broadcast Error ID 224	Cant Angle Sensor Error
Sensor Broadcast Error ID 192	Slew Angle Sensor Error
Sensor Broadcast Error ID 43XX	Safety Controller / I/O module 43XX (X denotes box ID)
Output Failure X - X	Output Failure on Safety Controller / I/O module X Output X (X denotes box ID and Input Number)
Unknown Duty	Incorrect Input Configuration/ slew position
Input Failure X - X	Input Failure on Safety Controller / I/O module X Output X(X denotes box ID and Input Number)
Override Keyswitch Failure	Override Keyswitch has been Damaged/ Disconnected
Override Timed out	Override feature has been enabled for X minutes (Default 30 minutes) and has been reset
Connector Tampering Detected	Beacon, Alarm, Override Keyswitch, Output/ Input Disconnected

14.3 On Screen ALO Component Error Messages

ALO CRC failure	EEprom config CRC failure
ALO CAN failure	Null Safety Controller pointer
ALO pilot failure	Failed to initialise CAN
ALO invalid S/C	Failed to initiate back drive controller class
ALO backdrive failure	Failed to initiate pilot/brake controller class
ALO slew CANopen failure	No slew CAN messages
ALO pitch/roll not detected	No dual axis CAN messages
ALO backdrive CANopen failure	No back drive controller CAN messages
ALO pilot CANopen failure	No pilot controller CAN messages
ALO left feedback error	Left controller feedback error > 10%
ALO right feedback failure	Right controller feedback error > 10%
ALO pilot feedback failure	Pilot controller feedback error > 10%
ALO brake feedback failure	Both joysticks active at once
ALO illegal joysticks	Left joystick input stuck low
ALO left joystick inactive error	Right joystick input stuck low
ALO right joystick inactive error	Left joystick input stuck high
ALO left joystick active error	Right joystick input stuck high
ALO right joystick active error	Left pressure switch input stuck low
ALO left pressure inactive error	Right pressure switch input stuck low
ALO right pressure inactive error	Left pressure switch input stuck high
ALO left pressure active error	Right pressure switch input stuck high
ALO right pressure active error	Failed to initialise axiomatic controller(s)
ALO controller failure	No/missing CAN messages from Safety Controller
ALO S/C not reporting	Brake controller feedback error > 10%
ALO slew DR	Slew dual redundant error

15 Data Logger

PMERail has two data-logging functions. The data logging icon appears in the bottom left of the screen. The data can only be viewed by extracting it from the system, contact your service agreement holder or Prolec Ltd for further assistance.

Where a data logging system is found not to be operational then the vehicle shall not be used until the fault is repaired and fully confirmed as operational. This requirement applies irrespective whether starting or partway through an operation.

1. The **Event Logger** will make a record of any significant operational event (overload, slew limit, etc), any error event (sensor failure etc), any manual intervention (override, clock set etc) and any activity within the system set-up (calibration adjustment etc). The event logger will store the past two months worth of data after which the oldest data will be deleted on a monthly basis.

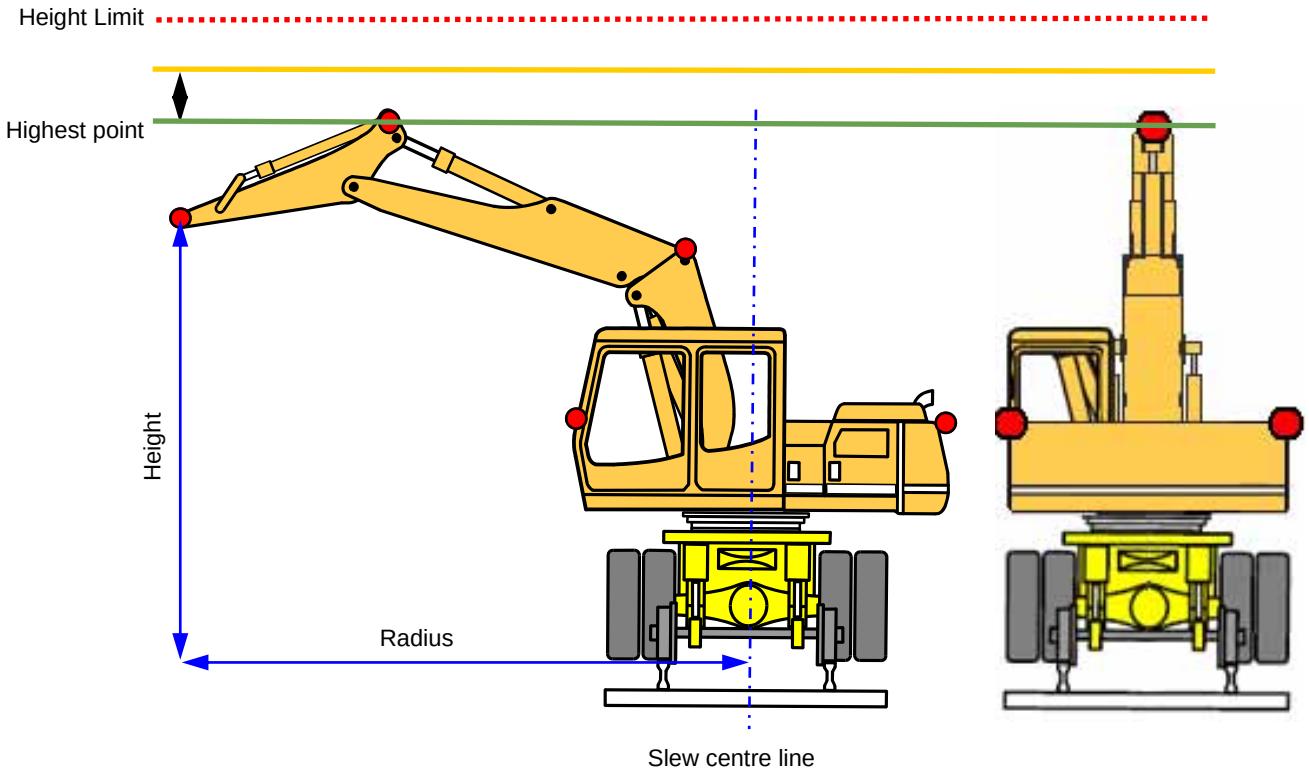
2. The **Periodic Logger** records the following data every 1 second:

Date	Time
Lifting duty	Load on hook
Lift point radius	Lift point height
Slew angle	Cant
Gradient	Operator code

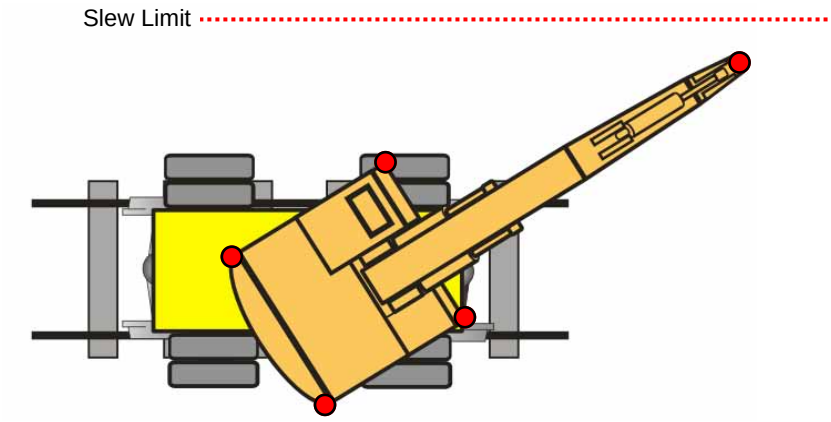
The event logger will store the past two months worth of operational hours data, (NOT elapsed time) after which the oldest data will be deleted on a monthly basis.

16 Equipment Position measurement

PMERail measures equipment pin positions using equipment mounted angle sensors. All positions are corrected for chassis pitch (rail gradient), roll (rail cant) and slew angle. The radius displayed on the operators screen represents the current lifting point and the height represents the tool pin height. Shown without hitch.

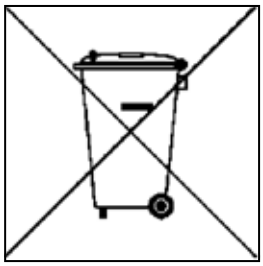


● = Equipment extremes measured by the system



◆ NB to account for extra equipment and pipework etc, both the bucket pin and arm ram pin can use an optional vertical safety ‘offset’ determined during RCC set-up and calibration.

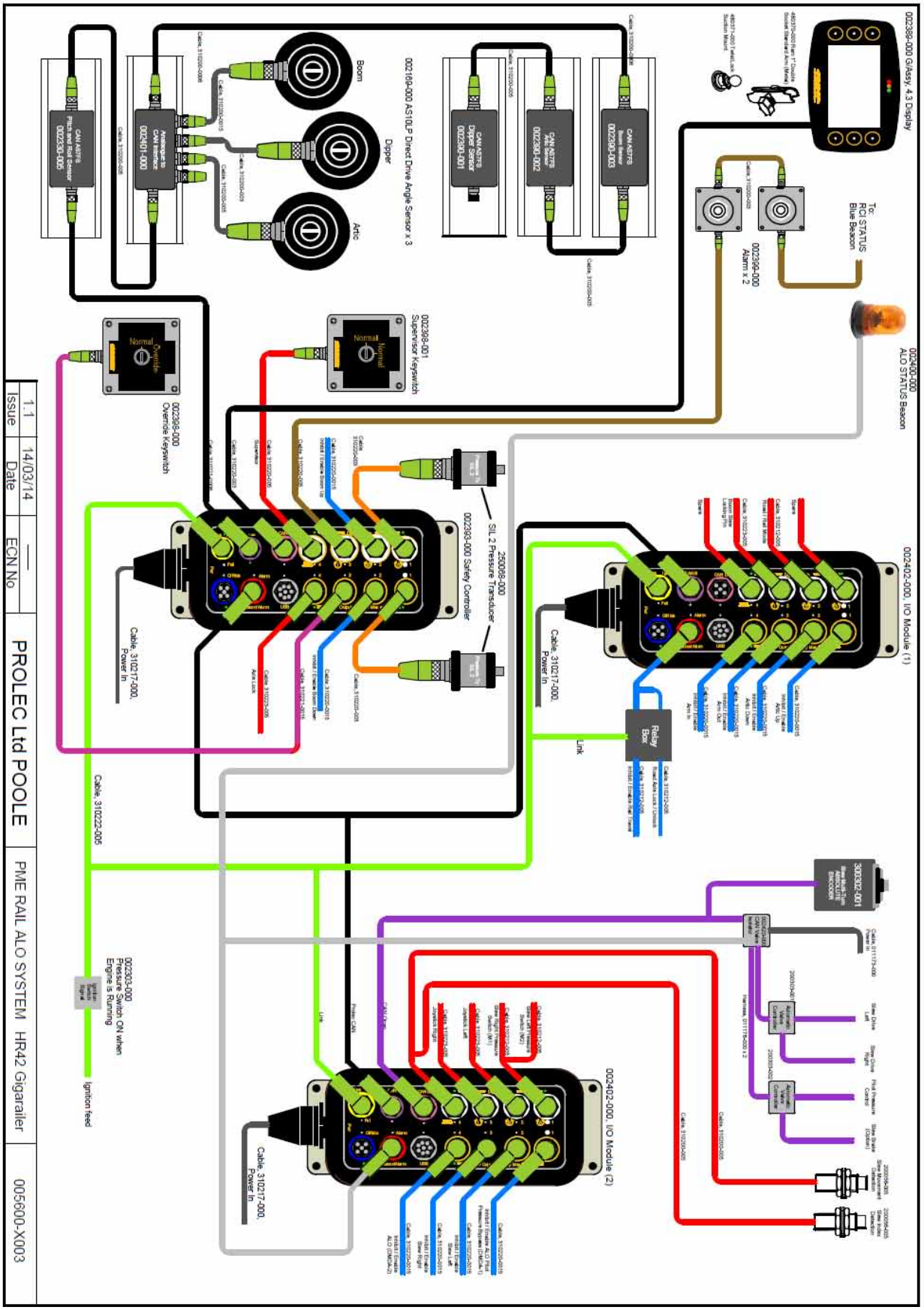
17 Taking Product out of Operation



Prolec Limited is committed to complying with the upcoming European Directive of RoHS (Restriction of Certain Hazardous Substances) and WEEE (Waste from Electrical and Electronic Equipment). PME is subject to the WEEE directive, therefore PME or any component must be returned to Prolec Ltd for correct disposal or recycling.

The display and safety controller / I/O module are fitted with internal batteries and must not be disposed of in landfill.

18 System Diagram



19 Definitions / Glossary

Definitions of words used to ensure understanding

P/N	Part Number
Boom	First articulation connected to turret
Arm	Second articulation
Artic	Second articulation of a hydraulically adjustable boom (luffing boom, knuckle boom, two piece boom)
Turret	Section of machine above the undercarriage
Undercarriage	Section which the tracks/wheels attach too
Track	continuous band of treads, metal or rubber covered
Wheeled excavator	An excavator fitted with wheels
Tracked excavator	An excavator fitted with tracks
Bucket	Digging attachment
Attachment	Tool fixed to the dipper other than a bucket
SC	Safety Controller
MMI	Man Machine Interface (i.e. Display)
CAN cable	Cable connecting system components
Angle sensor	Sensor detecting current equipment angle
Pitch	Longitudinal base machine angle (fore / aft) / Gradient
Roll	Lateral base machine angle (side to side) / Cant
Motion Cut	Direct control of component hydraulic service
Power Supply	DC supply voltage
Ram	Hydraulic Cylinder
Blade	heavy metal plate on the front of the machine, used for stability and moving material
Stabiliser	Hydraulically powered arms that can be lowered and raised to increase the Stability of the machine
Counterweight	Weight attached to the rear of an excavator to increase digging force and lifting capacity
Pivot pin	Point at which the articulations rotate about
Relay	Electronic device to operate motion cut valve
Offset Boom	Boom that pivots part way along or at it fixing point to the turret

20 Amendment / Revision Record

Issue	Section / Page	Amendment / Revision Description
1.0	N/A	Initial Document Release

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